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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/693,015	10/24/2003	William C. Phillips	1023-292US01	9353

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EXAMINER	
HELLER, TAMMIE K	

ART UNIT	PAPER NUMBER
3766	

MAIL DATE	DELIVERY MODE
10/25/2007	PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/693,015	PHILLIPS ET AL.	
	Examiner	Art Unit	
	Tammie Heller	3766	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *08 August 2007*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1,2,4-9,11-13,15-20 and 22-40* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1,2,4-9,11-13,15-20 and 22-40* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *8/8/07*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

1. The amendment filed on August 8, 2007 has been received and considered. By this amendment, claims 19 and 37 have been amended, claims 38-40 have been added, and claims 1, 2, 4-9, 11-13, 15-20, and 22-40 are now pending in the application.

Information Disclosure Statement

2. The information disclosure statement filed on August 8, 2007 has been considered and is enclosed.

Response to Arguments

3. Applicant's arguments filed August 8, 2007 have been fully considered and are considered persuasive in part. Applicant's argument that the battery of Maeda does not extend at least partially into an aperture formed by the internal antenna is not found persuasive. Applicant argues on page 10, first paragraph, that Maeda does not teach that Figure 3 is an exploded view of the device. This argument is not found persuasive because although Figure 3 may not be explicitly described as an exploded view, one of ordinary skill in the art, when observing Figure 3, would recognize that the apparatus of Maeda had been exploded in order to show the specifics of the apparatus components, as is commonly done with technical drawings. Further, Applicant argues that the battery 1 of Maeda is not disclosed to extend at least partially into the aperture formed by internal antenna 2. The Examiner takes the position that, when assembled, the apparatus disclosed in Figure 3 will include the battery 1 extending at least partially into

the aperture formed by internal antenna 2. Further, there is no teaching within Maeda that the battery 1 does not extend at least partially into the aperture formed by antenna 2. Therefore, the Examiner takes the position that the battery 1 of Maeda must extend at least partially into the aperture formed by antenna 2. Further, Applicant presents arguments regarding the embodiment of Maeda's invention illustrated in Figure 4, stating that within this embodiment, the battery is not capable of extending at least partially into the aperture formed by the internal antenna. However, as the Examiner is not relying on this embodiment to teach that the battery extends at least partially into the aperture formed by the internal antenna, this argument appears to be extraneous.

4. Applicant's argument regarding the motivation to combine the Stanton and Maeda references is found persuasive in part. Applicant argues that there is no disclosure in Maeda or Stanton that a more isotropic configuration of telemetric energy presents a load to an internal antenna. The Examiner agrees with this assertion, however the Examiner also considers that a more isotropic configuration of the telemetric energy would be a valid motivation to combine the Stanton and Maeda references.

5. Regarding dependent claims 5, 8, 9, 12, 23, 26, 27, and 29, Applicant argues that Stanton fails to disclose that circuits 50 and 52 are not disposed on circuit boards, and therefore fail to anticipate the claims. Regarding integrated circuit 50, Stanton discloses that integrated circuit 50 is disposed on a chip, as shown in Figure 8, therefore, based on this, the Examiner takes the position that integrated circuit 50 is configured as a circuit board.

Claim Rejections - 35 USC § 112

6. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

7. Claims 39 and 40 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

8. The term "substantially" in claims 39 and 40 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It is unclear from the claims and specification as to what constitutes a substantially closed loop or what would make an aperture substantially central.

Claim Rejections - 35 USC § 103

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1, 2, 4-9, 11, 13, 15-20, 22-28, and 30-40 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Maeda. Regarding claims 1, 17, 19, 33, 35-37, 39, and 40, Stanton discloses a patient programmer that includes an internal antenna 56 mounted within the housing and a battery bay indicated generally by

battery cover 14 (see Figures 1 and 6). However, Stanton fails to disclose that the internal antenna defines an aperture and that the battery bay extends into the programmer in substantial alignment with the aperture. Maeda discloses a telemetric communication device that includes a substantially closed loop antenna 2 that defines a substantially central aperture and a battery 1 that is positioned such that it is in substantial alignment with the aperture (see Figure 3). Maeda discloses that this configuration of the battery and antenna is utilized in order to facilitate a more isotropic configuration of the telemetric energy (see paragraph 33). Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to configure the programmer of Stanton such that the internal antenna defines an aperture and the battery bay extends into the programmer in substantial alignment with the aperture, as taught by Maeda, in order to facilitate a more isotropic configuration of the telemetric energy. Further, it would have been obvious to one having ordinary skill in the art to try the finite number of different configurations of antenna and battery described and illustrated by Maeda in order to ascertain the optimum characteristics for the device.

11. Regarding claims 2 and 20, a load is presented to an antenna when batteries are placed within its magnetic field. This load enhances noise immunity of the internal antenna to external electromagnetic interference. From Figure 3 of Maeda it is observed that the batteries are located within the magnetic field of the antenna and therefore present a load to the antenna. Therefore, the placement of the batteries in

Maeda inherently places a load on the internal antenna in order to enhance noise immunity to external electromagnetic interference.

12. Regarding claims 4 and 22, Stanton discloses that a 9-volt battery may be housed within the battery compartment (see col. 7, ln. 23). Therefore, the battery bay is sized to accommodate AAA batteries.

13. Regarding claims 5 and 23, Stanton discloses a first circuit board 50 and a second circuit 52 that are disposed within housing 10 (see Figures 1 and 6). It can be seen from Figure 1 that housing 10 includes first and second housing members. Although Stanton fails to describe circuit 52 as disposed on a circuit board, the Examiner takes the position that it is well known in the art to dispose circuits of different configurations on circuit boards, as can be seen from the specification of Stanton relating to integrated circuit 50 disposed on a circuit board. Therefore, it would have been obvious to one having ordinary skill in the art at the time of the invention to dispose the circuit 52 of Stanton on a circuit board in order to facilitate the ease with which the circuit may be connected to other electrical components, such is the case with circuit board 50. Further, it is inherent that when the device of Stanton is constructed, the first and second circuit boards will be disposed within the first and second housing members.

14. Regarding claims 6 and 24, Stanton discloses that the housing includes a battery compartment cover 14 that acts as an access opening for placement of batteries (see col. 5, ln. 55).

15. Regarding claims 7 and 25, it can be seen from Figures 6 and 7 of Stanton that the internal antenna may be displaced from the circuit board and coupled via a connector.

16. Regarding claims 8, 9, 26, and 27, Stanton discloses that the internal antenna may be mounted on a circuit board 52 controlling telemetric operations while a display 32 may be disposed on a separate circuit board 50 (see Figure 7 and col. 8, ln. 23-33). The Examiner takes the position that the LEDs disclosed by Stanton may be considered a display, as they are capable of displaying and indicating the status of the device.

17. Regarding claims 11, 18, 28, and 34, Stanton discloses that the programmer may used with an implantable neurostimulator (see col. 1, ln. 27-32).

18. Regarding claims 13 and 30, Stanton discloses that an external antenna 28 may be coupled to the programmer via a cable (see Figure 1).

19. Regarding claims 15 and 31, examiner takes Official Notice that it is well known in the antenna art to construct an internal antenna from a plastic frame wound with conductive winding in order to enhance the noise immunity of the antenna. The conductive winding is wound such that the direction of the helix determines the type of signal (either right or left-handed) the antenna is able to receive. The antenna consequently only receives the signals for which it is designed and noise from other sources is eliminated. Therefore, it would have been obvious to one of ordinary skill in the antenna art to construct the antenna of Stanton from a plastic frame wound with conductive winding in order to further increase the noise immunity of the antenna.

Applicant's attention is directed to U.S. Patent No. 3,683,389 to Hollis, Figure 1, where the coil/loop antennas 32 and 36 are wound on dielectric frame 28.

20. Regarding claims 16 and 32, examiner takes Official Notice that it is well known in the antenna art to use copper-braiding as a shielding mechanism for antennas to shield the electromagnetic field of the antenna and reduce electrical and electromagnetic interference caused by the antenna. Therefore, it would have been obvious to one of ordinary skill in the art to shield the antenna of Stanton using copper braiding in order to reduce electrical and electromagnetic interference and reduce antenna loading during transmission and reception. Applicant's attention is directed to U.S. Patent No. 2,203,517 to Beggs where shield 28 surrounds the loop antenna 3 wound on dielectric frame 27.

21. Regarding claim 38, the Examiner takes the position that buttons 19-22 of Stanton may act as a telemetry interface (see Figures 6 and 7 and col. 13, ln. 4-5).

22. Claims 12 and 29 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stanton in view of Maeda as applied to claims 1, 2, 4-9, 11, 13, 15-20, 22-28, and 30-40 above, and further in view of Mann et al. (U.S. 2002/0107476). Stanton in view of Maeda discloses the invention essentially as claimed, but fails to disclose that the display is a liquid crystal display. Mann discloses a patient programmer including a display 150 (see Figure 2). Further, Mann discloses that it is well known to use either LEDs or LCD as display devices (see paragraph 53). Therefore, it would have been obvious to one having ordinary skill in the art to substitute the LEDs of Stanton for an

LCD, as taught by Mann, as simple substitute of one known element for another to obtain predictable results is obvious to one having ordinary skill in the art.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Tammie Heller whose telephone number is 571-272-1986. The examiner can normally be reached on Monday through Friday from 7am until 3:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Carl H. Layno can be reached on 571-272-4949. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Tammie K. Heller
Patent Examiner
Art Unit 3766

CARL LAYNO
PRIMARY EXAMINER